

MECHANIC STUDY GUIDE

Suspension & Steering Systems

Heavy Duty Trucks

Listed below are a number of items and subjects which make up the mechanic certification tests identified above. An individual's ability to pass the certification test will depend upon the amount of knowledge the person has concerning these items:

Steering System Diagnosis - 18%

Hard steering complaint
Recovering from a turn
Noise in the power steering unit
Wheel shimmy
Tie rod end wear
Oil foaming in power steering system

Suspension Diagnosis - 14%

Air ride suspension operation
Leaf spring failure
Tire problems
Hendrickson suspensions
Torque rods
Tandem axle alignment

Wheel Alignment - 12%

Causes of uneven and rapid tire wear
Front end alignment procedure
Toe-in adjustment
Tire wear diagnosis

Caster/Camber - 6%

How to adjust caster on a solid axle
Recognize extreme conditions from a picture

Basic Steering System Knowledge - 32%

Front suspension components
Steering gears
Wheel bearings
Steering Wheel freeplay
Steering knuckle wear
Installing kingpin bushings
Sector shaft adjustment
Power steering pump replacement

Basic Suspension Knowledge - 18%

Cap screw head markings
Suspension adjustment
Equalizing beam suspensions
Adjustable trailer axles

SAMPLE QUESTION:

A tractor trailer rig with tandems on both units rides and handles good when loaded. When unloaded, the rig wobbles. Which of the following is the most likely cause of this condition?

- A. Misaligned trailer tandems.
- B. Wrong caster settings.
- C. Misaligned tractor tandems.
- D. Wrong toe setting.

ANSWER: B